

(use as many sheets as necessary)

Sheet

of

4

Application Number	10/789,552
Filing Date	February 26, 2004
First Named Inventor:	Hossein Sedarat
Art Unit	2631
Examiner Name	Not Yet Assigned
Attorney Docket Number	6491.P059

[illegible]

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				

Examiner
Signature

/Leon Viet Nguyen/

Date Considered

03/30/2007

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/789,552	
			Filing Date	February 26, 2004	
			First Named Inventor:	Hossein Sedarat	
			Art Unit	2631	
			Examiner Name	Not Yet Assigned	
Sheet	2	of	4	Attorney Docket Number	006491.P059
NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²
/LN/		FRANKLIN, CURT, "How DSL Works," How Stuff Works, http://computer.howstuffworks.com/dsl.htm/printable , printed November 16, 2004.			
		SEDARAT, HOSSEIN, et al., "Impulse Noise Protection for Multi-Carrier Communication Systems", Submitted to IEEE ICASSP (2005).			
		SEDARAT, HOSSEIN, et al., "Multicarrier Bit-Loading in Presence of Biased Gaussian Noise Sources", IEEE Consumer Communication and Networking Conference, January 2005.			
		BACCARELLI, ENZO, et al., "Novel Efficient Bit-Loading Algorithms for Peak-Energy-Limited ADSL-Type Multicarrier Systems, IEEE Trans on Signal Processing, vol. 50, no. 5, May 2002.			
		SONALKAR, RANJAN, et al., "An Efficient Bit-Loading Algorithm for DMT Application," IEEE Comm. Letters, vol. 4, pp. 80-82, March 2000.			
		CAMPELLO, JORGE, "Optimal Discrete Bit Loading for Multicarrier Modulation Systems," IEEE International Symposium on Information Theory, August 1998, Cambridge, MA.			
		CHOW, PETER S., et al., "A Practical Discrete Multitone Transceiver Loading Algorithm for Data Transmission over Spectrally Shaped Channels," IEEE Trans. on Communications, vol. 43, no. 2, 1995.			
		FISCHER, ROBERT F.H., et al., "A New Loading Algorithm for Discrete Multitone Transmission," IEEE, 1996, pp. 724-728.			
		LAMPE, LUTZ H.-J., et al., "Performance Evaluation of Non-Coherent Transmission over Power Lines," 8 pgs.			
/LN/		HENKEL, WERNER, et al., "Maximizing the Channel Capacity of Multicarrier Transmission by Suitable Adaptation of the Time-Domain Equalizer," IEEE, Vol. 48, no. 12, December 2000.			
Examiner Signature	/Leon Viet Nguyen/			Date Considered	03/30/2007

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/789,552
				Filing Date	February 26, 2004
				First Named Inventor:	Hossein Sedarat
				Art Unit	2631
				Examiner Name	Not Yet Assigned
Sheet	3	of	4	Attorney Docket Number	006491.P059
NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²
/LN/		LASHKARIAN, NAVID, et al., "Fast Algorithm for Finite-Length MMSE Equalizers with Application to Discrete Multitone Systems," IEEE 1999, pp. 2753-2756.			
		MELSA, PETER J.W., et al., "Impulse Response Shortening for Discrete Multitone Transceivers," IEEE Vol. 44, no. 12, December 1996, pp. 1662-1672.			
		AL-DHAHIR, NAOFAL, et al., "Optimum Finite-Length Equalization for Multicarrier Transceivers," IEEE Vol. 44, No. 1, January 1996, pp. 56-64.			
		LEKE, ACHANKENG, et al., "A Maximum Rate Loading Algorithm for Discrete Multitone Modulation Systems," IEEE 1997, pp. 1514-1518.			
		BINGHAM, JOHN A.C., "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come," IEEE, May 1990, pp. 5-14.			
		ARSLAN, G., et al., "Equalization for Discrete Multitone Transceivers to Maximize Bit Rate," IEEE, Vol. 49, No. 12, December 2001, pp. 3123-3135.			
		FARHANG-BOROUJENY, BEHROUZ, et al., "Design Methods for Time-Domain Equalizers in DMT Transceivers," IEEE, Vol. 49, No. 3, March 2001, pp. 554-562.			
		WYGLINSKI, ALEXANDER M., et al., "An Efficient Bit Allocation for Multicarrier Modulation," IEEE Wireless Communication, Networking Conference, Atlanta, GA, March 2004, 4 pgs.			
		"Draft Standard," Network and Customer Installation Interfaces- Asymmetric Digital Subscriber Line (ADSL) Metallic Interface, Draft American National Standard for Telecommunications, Alliance for Telecommunications Industry Solutions, T1.413-1998.			
		KRONGOLD, BRIAN S., et al., "Computationally Efficient Optimal Power Allocation Algorithms for Multicarrier Communication Systems," IEEE Trans. on Communications, vol. 48, pp. 23-27, Jan. 2000.			
↓ /LN/		BARRETO, ANDRE NOLL, et al., "Adaptive Bit Loading for Wireless OFDM Systems," IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, October 2001.			

Examiner Signature	/Leon Viet Nguyen/	Date Considered	03/30/2007
--------------------	--------------------	-----------------	------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/789,552
				Filing Date	February 26, 2004
				First Named Inventor:	Hossein Sedarat
				Art Unit	2631
				Examiner Name	Not Yet Assigned
Sheet	4	of	4	Attorney Docket Number	006491.P059
NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²
/LN/		MILOSEVIC et al., "Simultaneous Multichannel Time Domain Equalizer Design Based on the Maximum Composite Shortening SNR". Dept. of Electrical and Computer Eng., The University of Texas, Austin Texas, Prior to filing date of current application, pp. 5 total.			
↓		ANA GARCIA ARMADA et al., "Multi-User Constant-Energy Bit Loading for M-PSK-Modulated Orthogonal Frequency Division Multiplexing", © 2002 IEEE, pp. 526-530.			
↓		MISAO FUKUDA et al., "A Line Terminating LSI Using Echo Cancelling Method for ISDN Subscriber Loop Transmission". IEEE Journal on Selected Areas in Communications, Vol. 6, No. 3, April 1988, pp. 476-483.			
↓		CHENG-SHING WU et al., "A Novel Cost-Effective Multi-Path Adaptive Interpolated FIR (IFIR)-Based Echo Canceller", © 2000 IEEE, pp. V-453-V-456.			
↓		Ranjan V. Sonalkar et al., "Shannon Capacity of Frequency-Overlapped Digital Subscriber Loop Channels", © 2002 IEEE, pp. 1741-1745.			
↓		IVAN A. PEREZ-ALVAREZ et al., "A Differential Error Reference Adaptive Echo Canceller for Multilevel PAM Line Codes" *Work supported by National Project T1C95-0026, © 1996, IEEE, pp. 1707-1710.			
/LN/		NADEEM AHMED et al., "Optimal Transmit Spectra for Communication in the Presence of Crosstalk and Imperfect Echo Cancellation", Copyright 2001 IEEE, pp. 17-21.			

Examiner Signature	/Leon Viet Nguyen/	Date Considered	03/30/2007
-----------------------	--------------------	--------------------	------------

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.